



Indian Standard

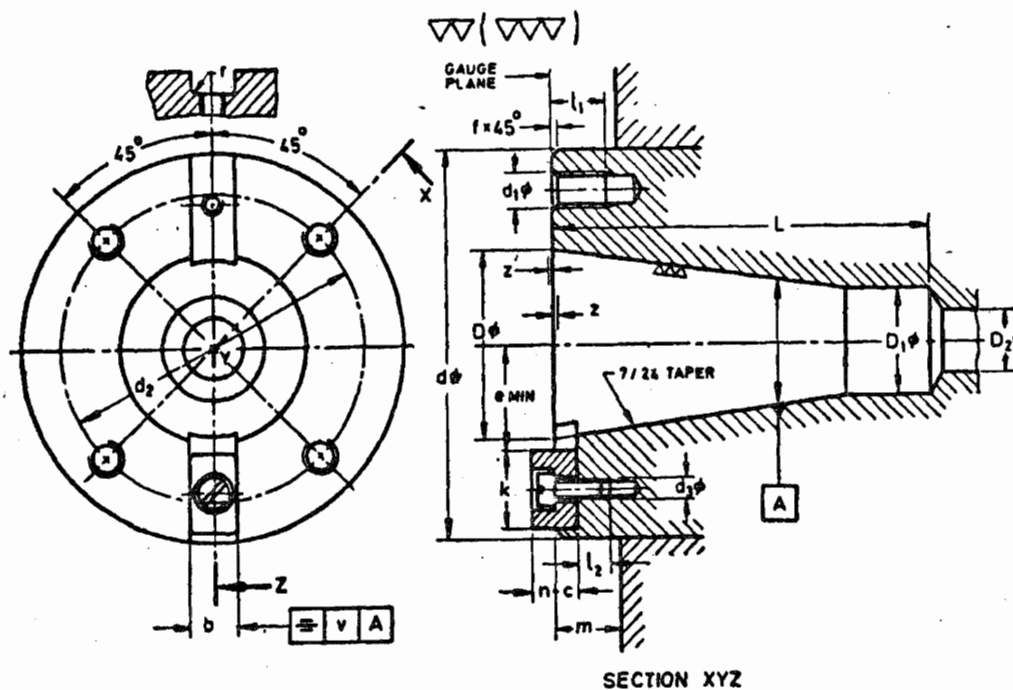
(Reaffirmed 1998)

(Reaffirmed 2013)

DIMENSIONS FOR SELF-RELEASE 7/24 TAPERS FOR SPINDLE NOSES FOR MILLING MACHINES

1. Scope — Dimensions for self-release 7/24 tapers for spindle noses for milling machines.

2. Dimensions



2.1 Internal Details

All dimensions in millimetres.

Self-Release 7/24 Taper No.	30	40	45	50	55	60	65	70	75	80
D Basic	31.750	44.450	57.150	69.850	82.600	107.950	133.350	165.100	203.200	254.000
D ₁ H12	17.4	25.3	32.4	39.60	50.4	60.2	75.0	92.0	114.0	140.0
D ₂ Min	17	17	21	27	27	35	42	42	56	56
L Min	73	100	120	140	178	220	265	315	400	500
z*	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4

*z = Maximum permissible deviation on either side of the end of the taper of the position of the gauge plane *d* from the nominal position of coincidence with the end of the taper.

Adopted 7 November 1972

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2.2 Cutter Head Insertion Details

All dimensions in millimetres.

Self-Release 7/24 Taper No.	30	40	45	50	55	60	65	70	75	80
d_{h5}	69.832	88.882	101.600	128.570	152.400	221.440	280.000	335.000	400.000	500.000
d_1	M10	M12	M12	M16	M20	M20	M24	M24	M30	M30
d_2^*	54.0	66.7	80.0	101.6	120.6	177.8	220.0	265.0	315.0	400.0
l_1 Min	16	20	25	25	30	30	36	45	56	63
f	2	2	2	3	3	3	4	4	4	4
*Tolerance on the position of fixing holes (maximum radial deviation from the theoretical position): No. 30 to No. 45 : 0.075 mm No. 50 to No. 60 : 0.100 mm No. 65 and No. 70 : 0.125 mm No. 75 and No. 80 : 0.160 mm										

2.3 Tenon and Tenon Slot

All dimensions in millimetres.

Self-Release 7/24 Taper No.	30	40	45	50	55	60	65	70	75	80
k Max	16.5	19.5	19.5	26.5	26.5	45.5	58	68	86	106
b M6/h5	15.9	15.9	19.0	25.4	25.4	25.4	32	32	40	40
c Min	8	8	9.5	12.5	12.5	12.5	16	20	25	31.5
m Min	12.5	16	18	19	25	38	38	50	50	50
n Max	8	8	9.5	12.5	12.5	12.5	16	20	25	31.5
d_s	M6	M6	M6	M12	M12	M12	M16	M16	M20	M20
l_s	9	9	18	18	18	18	24	24	30	30
r	1.6	1.6	1.6	2	2	2	2.5	2.5	2.5	2.5
e Min	16.5	23	30	36	48	61	75	90	108	136
v	± 0.03	± 0.03	± 0.03	± 0.04	± 0.04	± 0.40	± 0.05	± 0.05	± 0.05	± 0.05

3. Tolerances

3.1 Tolerance on taper on gauge plane diameter D : $\pm IT6$.

3.2 Tolerances on dimensions without specified tolerances shall be of grade 'medium' according to IS : 2102-1969 'Allowable deviations for dimensions without specified tolerances (first revision)'.

EXPLANATORY NOTE

The dimensions specified in this standard were originally covered in IS : 2340-1964 'Dimensions for self-release (7/24) tapers for arbors and spindle noses for milling machines' which was based on the draft ISO Recommendation No. 389 issued by the International Organization for Standardization. The revision of IS : 2340-1964 was necessitated to bring it in line with the recent work done at the international level and has now been split into two separate standards. The present standard which covers only dimensions for spindle noses for milling machines has been enlarged to include dimensions 7/24 taper No. 45, 55, 65, 70, 75 and 80.

The dimensions for 7/24 tapers for milling arbor and tool shanks are covered in IS : 2340-1972 'Dimensions for self-release 7/24 tapers for milling arbor and tool shanks'.

AMENDMENT NO. 1 NOVEMBER 2000
TO
IS 6681 : 1972 DIMENSIONS FOR SELF-RELEASE
7/24 TAPERS FOR SPINDLE NOSES FOR
MILLING MACHINES

(Page 2, Explanatory Note) — Insert the following at the end of the Note.

“For hardness requirement of self release 7/24 taper for spindle noses for milling machines the hardness of 58 to 62 HRC to be taken into account in line with IS 8611 : 1988 ‘Technical supply conditions for milling arbors and accessories (first revision)’.”

(BP 11)

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